Chapter 4

Graduate Enrollment

Overview

Graduate enrollment in science and engineering[1] rose in 1999 after 5 consecutive years of decline. (See appendix table 4-1.) The growth was entirely attributable to increases in enrollment among students with temporary visas, women, and minorities. The number of white male graduate students continued to decline in 1999, as it had since at least 1994 (the first year data were available by sex and race jointly). Among U.S. citizens and permanent residents, the numbers of female graduate students in all racial/ethnic groups increased in 1999, as did the numbers of Asian, black, and Hispanic men.

This chapter examines enrollment rates of recent recipients of S&E bachelor's degrees, graduate enrollment trends, graduate fields of study, full- and part-time enrollment patterns, sources of financial support, debt at graduation, and graduate school attrition rates.

Transition to graduate school

Women

Longitudinal data show that there is no more attrition for female bachelor's degree recipients—regardless of degree field—than for male between baccalaureate receipt and graduate enrollment. Among S&E bachelor's degree recipients, women are more likely than men to pursue additional study. In 1999, 33 percent of the women and 28 percent of the men who had received an S&E baccalaureate in academic year 1996/97 or 1997/98 were enrolled in an educational program either full or part time. (See text table 4-1.)

Women are, however, a smaller percentage of S&E graduate students than of S&E bachelor's degree recipients. As noted in the previous chapter, women received 49 percent of all baccalaureates awarded in S&E fields in 1998. In 1999, women constituted 45 percent of U.S. citizen and permanent resident graduate students in S&E fields. This difference in participation in bachelor's versus graduate study is particularly evident in certain S&E fields, notably the physical sciences and mathematics. (See text table 4-2.) Within other broad S&E fields, women account for similar percentages of total bachelor's recipients and of graduate students. Small sample sizes do not permit further exploration of the differences in the physical sciences and mathematics. It is possible, for example, that women with baccalaureates in these fields may pursue further study in non-S&E fields to a greater extent than do men.

Minorities

Members of all racial/ethnic groups,[2] with the exception of Asians, have comparable levels of participation in further study following receipt of an S&E baccalaureate. Among those who received S&E bachelor's degrees in 1996/97 and 1997/98, between 29 and 30 percent of whites, Hispanics, and blacks were enrolled full or part time in April 1999; the comparable percentage for Asians was 36 percent. (See text table 4-1.)

The percentages of blacks, Hispanics, and American Indians among those receiving S&E baccalaureates are similar to the respective rates of representation for these groups among S&E graduate students. Disaggregation by field shows that these similarities of representation occur across most S&E fields. (See text table 4-2.) In computer science, however, blacks and Hispanics accounted for smaller percentages of graduate students enrolled in 1999 than of the bachelor's recipients of 1998, while Asians constituted a much higher percentage.

Students with disabilities

Students with disabilities, who constituted 4 percent of the 1996/97 and 1997/98 S&E bachelor's degree recipients, were just as likely as those without disabilities to be enrolled full or part time in an educational program in 1999. Among this cohort, 30 percent of students with and without disabilities were enrolled in April 1999. (See text table 4-1.)

[1] Data in this chapter cover graduate science and engineering enrollment in academic institutions in the aggregate United States, which includes the 50 states, the District of Columbia, and the U.S. territories and outlying areas (American Samoa, the former Canal Zone, the Northern Mariana Islands, Puerto Rico, the U.S. Virgin Islands, and the Trust Territory of the Pacific Islands).

[2] Data refer to U.S. citizens and permanent residents only.

Text table 4-1

Enrollment, degree attainment, and employment status of academic year 1996/97 and 1997/98 S&E bachelor's degree recipients: April 1999

Sex, race/ethnicity, and disability status	Total number	Enrollment status			Degree attainment		Employment status		
		Full-time student	Part-time student	Not a student	Had attained a master's or higher degree	Had not attained a master's or higher degree	Employed full time	Employed part time	Not employed
		Percent							
Total	734,189	22.3	8.0	69.7	2.0	98.0	72.1	12.1	15.8
Male	360,298	21.3	6.7	71.9	2.2	97.8	75.6	10.3	14.1
Female	373,891	23.2	9.3	67.6	1.7	98.3	68.8	13.8	17.5
White, non-Hispanic	553,942	21.7	8.0	70.3	1.9	98.1	72.7	12.4	14.9
Asian/Pacific Islander	70,832	27.5	8.4	64.1	3.9	96.1	66.3	10.9	22.9
Black, non-Hispanic	51,027	20.4	8.8	70.7	1.4	98.6	75.2	9.9	14.9
Hispanic	53,639	22.7	7.7	69.5	1.1	98.9	71.8	12.6	15.6
American Indian/Alaskan Native	4,749	S	S	S	S	S	S	S	S
Without disabilities	706,655	22.3	8.0	69.7	2.0	98.0	72.3	12.1	15.7
With disabilities	27,534	20.6	9.3	70.0	1.4	98.6	69.1	11.4	19.5

S suppressed for reasons of data reliability

NOTES: Details may not add to totals because of rounding. Percentages were calculated on rounded data.

SOURCE: National Science Foundation, Division of Science Resources Statistics, National Survey of Recent College Graduates.

Women, Minorities, and Persons With Disabilities in Science and Engineering: 2002

Enrollment trends

Women

In 1999, 41 percent of the graduate students in S&E fields were women, up from 34 percent in 1990. The number of women enrolled in S&E graduate programs also increased over this time period—rising from 133,737 in 1990 to 168,468 in 1999. (See figure 4-1 and appendix table 4-2.) From 1990 to 1999, the number of female graduate students increased in all broad S&E fields, except mathematics, and the percentage of graduate students who are women increased both in science and engineering as a whole and in each broad S&E field. (See figure 4-2.) The number of men enrolled in graduate S&E programs declined during the same time period—dropping from 263,391 in 1990 to 242,840 in 1999. (See appendix table 4-3.)

The percentage of first-time S&E graduate students who are women is also rising. In 1999, 41 percent of full-time first-time S&E graduate students were female, compared to 35 percent in 1990. (See appendix table 4-4.) As much of this increase can be attributed to a decline in the number of men among first-time students as to an increase in the number

Top Institutions Enrolling Female Graduate Students in S&E

The top institutions enrolling female graduate students in S&E are, for the most part, large public research institutions—as are the top institutions enrolling their male counterparts. The University of Minnesota, University of Colorado, and University of California–Berkeley were the top institutions enrolling female S&E graduate students in 1999. (See appendix table 4-5.)* Stanford University, the University of Michigan, and the Massachusetts Institute of Technology were the top institutions enrolling male S&E graduate students.

*The top institutions are ranked by number of women rather than percentage of women. Ranking by percentage results in high rankings for institutions with a single small S&E department, all or most of whose graduate students are women. It results in low rankings for large institutions with many S&E departments, half or more of whose graduate students are women. This distinction is important: only 2 of the top 20 schools ranked in terms of *number* of female students are included in the top 20 institutions ranked by *percentage* of female students.

Text table 4-2

Women and minorities as percentages of students earning S&E bachelor's degrees and of students enrolled in graduate S&E programs, by field: 1998 and 1999

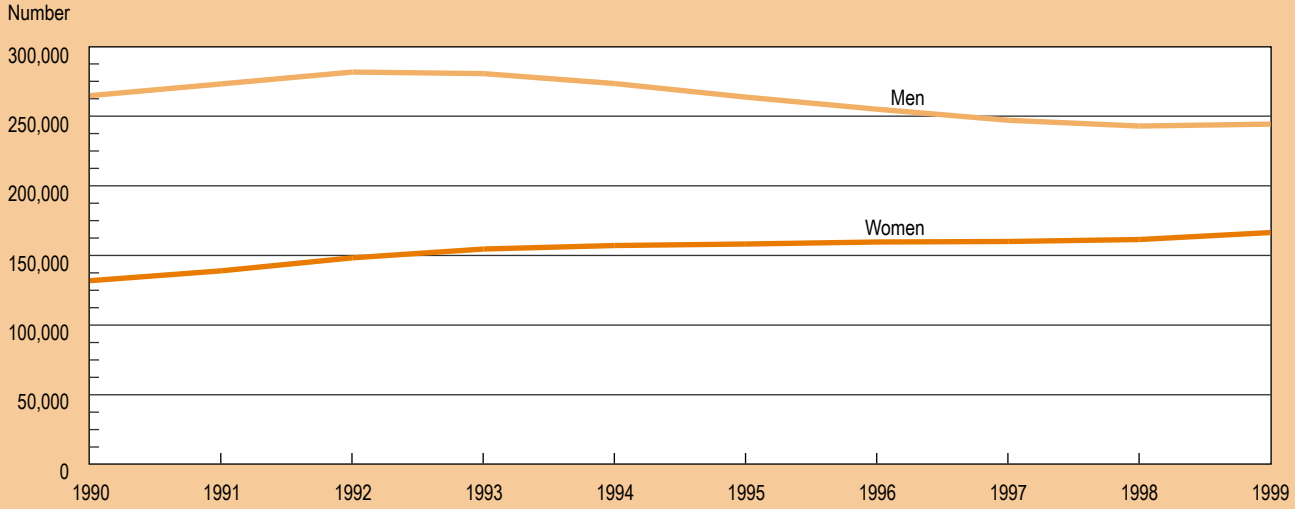
Field	Women (all races/ethnicities)		Asians/Pacific Islanders (both sexes)		Blacks (both sexes)		Hispanics (both sexes)		American Indians/ Alaskan Natives (both sexes)	
	Bachelor's degree 1998	Graduate enrollment 1999	Bachelor's degree 1998	Graduate enrollment 1999	Bachelor's degree 1998	Graduate enrollment 1999	Bachelor's degree 1998	Graduate enrollment 1999	Bachelor's degree 1998	Graduate enrollment 1999
Science and engineering, total	48.6	45.0	9.0	9.1	8.2	6.7	6.8	5.5	0.6	0.5
Physical sciences	39.2	30.0	10.8	8.6	7.2	4.6	5.4	4.6	0.6	0.4
Earth, atmospheric, and ocean sciences	37.0	42.1	2.2	3.5	1.7	1.8	2.8	3.3	0.6	0.5
Mathematics	46.9	38.5	7.2	9.7	8.3	5.7	5.2	4.3	0.6	0.3
Computer science	26.6	29.3	12.6	24.2	10.4	5.9	5.8	3.4	0.4	0.3
Agricultural sciences	42.9	42.8	2.5	3.2	2.3	2.9	3.6	4.5	0.9	0.7
Biological sciences	55.4	52.7	13.5	9.7	6.9	4.9	6.5	4.7	0.6	0.4
Psychology	74.4	72.4	5.8	4.1	9.3	7.6	7.5	7.2	0.7	0.6
Social sciences	50.2	53.0	7.2	4.8	10.4	11.3	7.6	7.0	0.7	0.8
Engineering	19.0	20.6	12.4	13.6	5.4	4.9	7.3	4.9	0.5	0.4

NOTE: Data are for U.S. citizens and permanent residents only.

SOURCES: Tabulations by National Science Foundation, Division of Science Resources Statistics (NSF/SRS); data from U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System, Completions Survey, and NSF/SRS, Survey of Graduate Students and Postdoctorates in Science and Engineering.

Women, Minorities, and Persons With Disabilities in Science and Engineering: 2002

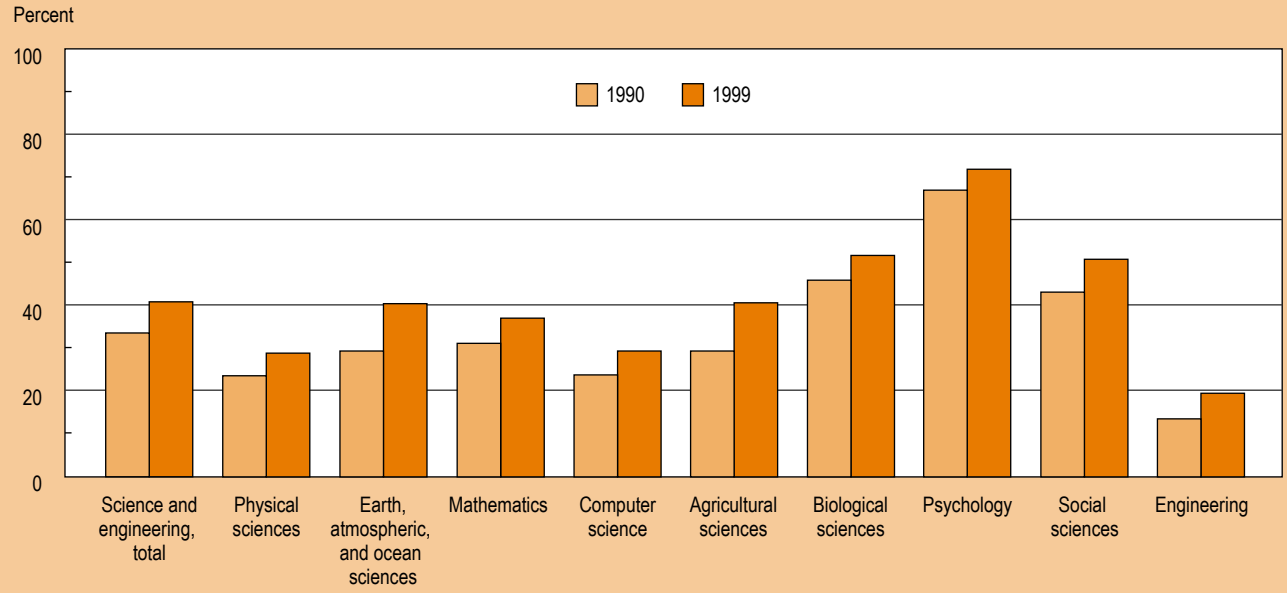
Figure 4-1
S&E graduate students, by sex: 1990–99



SOURCE: National Science Foundation, Division of Science Resources Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, various years.

Women, Minorities, and Persons With Disabilities in Science and Engineering: 2002

Figure 4-2
Proportion of S&E graduate students who are women, by field: 1990 and 1999



SOURCE: National Science Foundation, Division of Science Resources Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, various years.

Women, Minorities, and Persons With Disabilities in Science and Engineering: 2002

of women. Male full-time first-time S&E graduate student enrollment dropped 11 percent between 1990 and 1999 (from 49,502 to 44,216). Concurrently, the number of women increased 15 percent—from 27,068 to 31,031.

Minorities

Across all disciplines, the numbers of Asian and American Indian graduate students increased 1 percent, and the numbers of black and Hispanic graduate students increased 3 percent, between 1998 and 1999.[3] At the same time, the number of white graduate students decreased 2 percent (Syverson 2001).

The numbers of minority graduate students in S&E have increased since 1990. (See figure 4-3.) The number of black S&E graduate students rose from 12,774 in 1990 to 20,341 in 1999, of Hispanics from 10,159 to 16,514, of American Indians from 1,054 to 1,557, and of Asians from 17,155 to 27,562. (See appendix table 4-6.) In contrast, the number of white S&E graduate students dropped over that time period—from 238,465 in 1990 to 216,865 in 1999. As noted in chapter 2, the white college-age population (18- to 24-year-olds) declined from 1990 through 1997.

During the 1990s, the percentage of minority graduate students increased in science and engineering as a whole as well as in each broad S&E field. Asian students increased

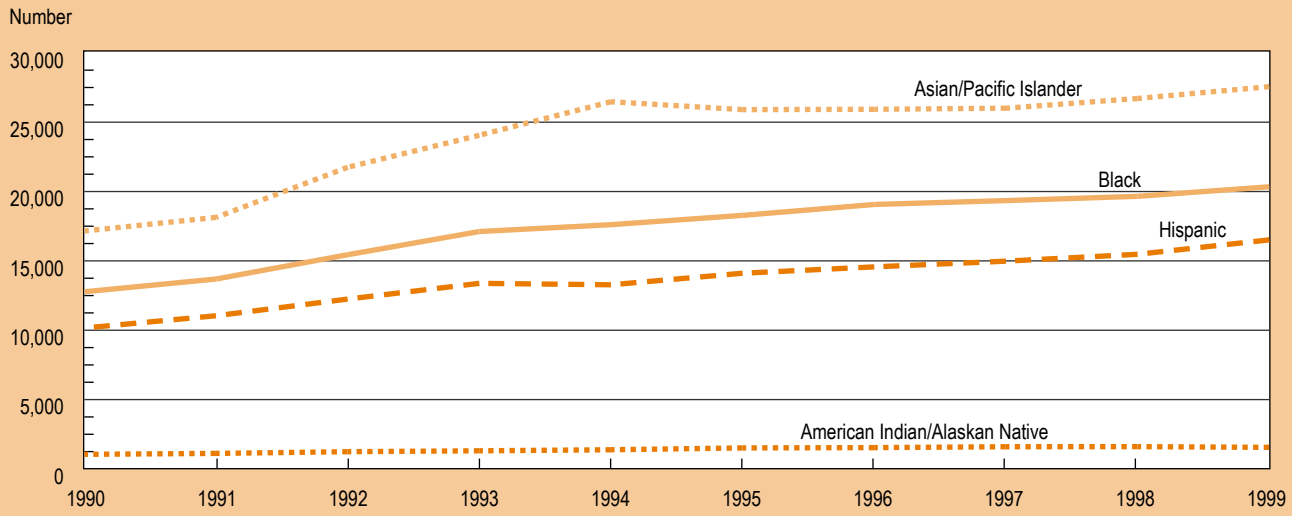
Top Institutions Enrolling Minority Graduate Students in S&E

The top institutions enrolling minority graduate students in S&E reflect the regional demographics of minority populations. More than half (55 percent) of the nation's blacks lived in the South in 1999; 44 percent of Hispanics and 53 percent of Asians lived in the West. The country's American Indian population was similarly concentrated in the West, with 50 percent living in six states—Oklahoma, California, Arizona, New Mexico, Alaska, and Washington.

Of the top 20 institutions with the largest numbers of black graduate students, seven are historically black colleges and universities and most are located in the South. Seventeen of the top 20 institutions enrolling Hispanic S&E graduate students are in California, Puerto Rico, Texas, and Florida—all places with high concentrations of Hispanics in their population. Nine of the top 20 academic institutions enrolling Asian S&E graduate students are in California. Eleven of the top 20 institutions enrolling American Indians as graduate students are in California, Arizona, and Oklahoma. (See appendix table 4-7.)

[3]Data refer to U.S. citizens and permanent residents only.

Figure 4-3
Minority S&E graduate students, by race/ethnicity: 1990–99



NOTE: Data are for U.S. citizens and permanent residents only and do not include students on temporary visas.

SOURCE: National Science Foundation, Division of Science Resources Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, various years.

Women, Minorities, and Persons With Disabilities in Science and Engineering: 2002

their representation among all U.S. citizen and permanent resident S&E graduate students from 6 percent in 1990 to 9 percent in 1999, blacks from 4 to 7 percent, Hispanics from 3 to 5 percent, and American Indians from 0.4 to 0.5 percent. Concurrently, the percentage of white graduate students declined from 81 to 72 percent. (See appendix table 4-6.)

Data on the sex of S&E graduate students by race/ethnicity are available only as far back as 1994. For the 5 years for which data are available, the numbers of female S&E graduate students in each racial/ethnic group—except white—increased, as did the numbers of black, Hispanic, and American Indian men. The numbers of white and Asian men in graduate S&E study dropped from 1994 to 1999. (See appendix tables 4-8 and 4-9.)[4]

Graduate Education at Minority-Serving Institutions

Historically black colleges and universities (HBCUs) account for a disproportionate share of black S&E graduate students. HBCUs, although only 4 percent of all academic institutions enrolling S&E graduate students, account for 16 percent of all black graduate students in these fields. (See appendix table 4-10.) These institutions accounted for higher percentages of black enrollment in some fields, notably in the agricultural sciences (56 percent of all black graduate students in this field), biological sciences (25 percent), and mathematics (22 percent), in 1999.

Unlike HBCUs, the institutions classified as Hispanic-serving institutions (HSIs) change from year to year. Among the criteria for inclusion as an HSI, as per the Higher Education Act of 1965 as amended and 20 U.S.C. 1059c, are that the institution have at least 25 percent Hispanic full-time undergraduate enrollment and that at least 50 percent of its Hispanic students be low income. Different institutions fulfill these qualifications in any given year, and an institution that qualified in one year may or may not in a subsequent year. In 1999, 203 institutions met the HSI criteria. These accounted for 6 percent of all academic institutions enrolling S&E graduate students, 29 percent of all Hispanic graduate students in S&E fields, and 41 percent of all Hispanics enrolled in the agricultural sciences. (See appendix table 4-11.) Of these institutions, the University of Puerto Rico–Rio Piedras enrolled the largest number of Hispanic graduate students in S&E in 1999. Florida International and California State–Los Angeles enrolled the largest numbers of Hispanic graduate students in S&E in the 50 states and the District of Columbia. (See appendix table 4-7.)

Tribal colleges offer primarily two-year certificates or degrees. Only two offer graduate programs; neither had graduate students in S&E in 1999.

Minority Enrollment in Texas and California

Results are mixed regarding the effects of changes in legislation or policy on graduate enrollment. In Texas and California, respectively, legislation—i.e., Hopwood v. Texas 78 F.3d 932 (5th Cir. 1996), cert. denied, 116 S. Ct. 2581 (1996)—and state policy—i.e., the Regents of the University of California Policy Ensuring Equal Treatment Admissions (SP-1), approved July 20, 1995—disallowing preferences based on race/ethnicity went into effect in 1997. In Texas, black graduate enrollment in science and engineering was more or less the same in 1999 as it was before the legislation went into effect; Hispanic enrollment decreased 14 percent—the same as white enrollment. In California, Hispanic graduate enrollment in 1999 was higher than in 1996; concurrently, white enrollment dropped 5 percent, and black enrollment dropped 14 percent. (See "Trends in Enrollment of Minorities in California and Texas," NSF/SRS 2000b.)

Students with disabilities

About 3 percent of graduate students studying in all fields reported a disability in 1996. (See appendix table 4-12.) Graduate students with disabilities are older, on average, than those without disabilities. They are more likely than those without disabilities to be female and more likely than those without disabilities to be black or Hispanic. See appendix A for information on all data sources.[5]

[4] For data on graduate enrollment of minority men and women by detailed fields, see http://www.nsf.gov/sbe/srs/gss/start.htm.

[5] The source of most of the data in this chapter—the National Science Foundation's Survey of Graduate Students and Postdoctorates in Science and Engineering, a survey of U.S. academic institutions with graduate S&E departments—does not collect data on students with disabilities. As noted in previous chapters, data on such individuals do not tend to be included in comprehensive institutional records; and, if they are, such information is likely to be kept confidential and used as a means of providing special services to students. The source of the data reported here is the National Postsecondary Student Aid Study, a sample survey done by the National Center for Education Statistics of individuals in postsecondary educational institutions. The survey defines students with disabilities as those who reported having one or more of the following conditions: a specific learning disability, a visual handicap, hard of hearing, deafness, a speech disability, an orthopedic handicap, or a health impairment.

Fields of study

Women

Women account for more than half of all graduate students in some science fields: in 1999, for example, 72 percent of the graduate students in psychology were female, as were 53 percent in the biological sciences and in the social sciences. (See figure 4-2 and appendix tables 4-1 and 4-2.) Roughly 30 to 40 percent of the graduate students in most other science fields—the physical sciences; the earth, atmospheric, and ocean sciences; mathematics; computer science; and the agricultural sciences—were female. In contrast, women only accounted for 21 percent of all graduate students in engineering.

Minorities

Among U.S. citizens and permanent residents,[6] the field distributions of S&E graduate students for the various racial/ethnic groups are quite different. Larger percentages of black, Hispanic, and American Indian S&E graduate students, as well as of white students, were in the social and behavioral sciences compared to Asian students in 1999. Specifically, more than half of black, Hispanic, and American Indian S&E graduate students and 39 percent of white S&E graduate students were in psychology or the social sciences compared with 20 percent for Asians. On the other hand, larger percentages of Asian S&E graduate students than of other groups were in engineering and computer science. (See figure 4-4.) These differences in field distribution by race/ethnicity hold for both men and women. (See appendix tables 4-8 and 4-9.)

Students with disabilities

There are substantial variations in graduate field choice based on disability status. Smaller percentages of graduate students with disabilities than of those without disabilities were in the life and physical sciences and in engineering, computer science, and mathematics in 1996. Roughly the same proportions of all graduate students with and without disabilities were in the social and behavioral sciences and in many non-S&E fields. On the other hand, a much higher percentage of students with disabilities (29 percent) than of those without (12 percent) were enrolled in graduate health programs. (See figure 4-5 and appendix table 4-13.)

[6]Data refer to U.S. citizens and permanent residents only.

Enrollment status

Women

Female S&E graduate students are about as likely as male to be enrolled full time in graduate school. In 1999, 68 percent of female and 70 percent of male graduate students in S&E were enrolled on a full-time basis. (See appendix table 4-14.)

Minorities

There is relatively little variation by racial/ethnic group[7] in full- versus part-time S&E graduate enrollment. Roughly 65 percent of each racial/ethnic group was enrolled full time; the single exception to this was black students, 55 percent of whom were enrolled full time. (See appendix table 4-15.)

Students with disabilities

Students with disabilities, across all fields of graduate study, are about as likely to be enrolled full time as those without disabilities. In 1996, 34 percent of students with disabilities and 33 percent of those without were enrolled full time in graduate and first-professional programs.[8] (See appendix table 4-12.)

Sources of Financial Support

Women

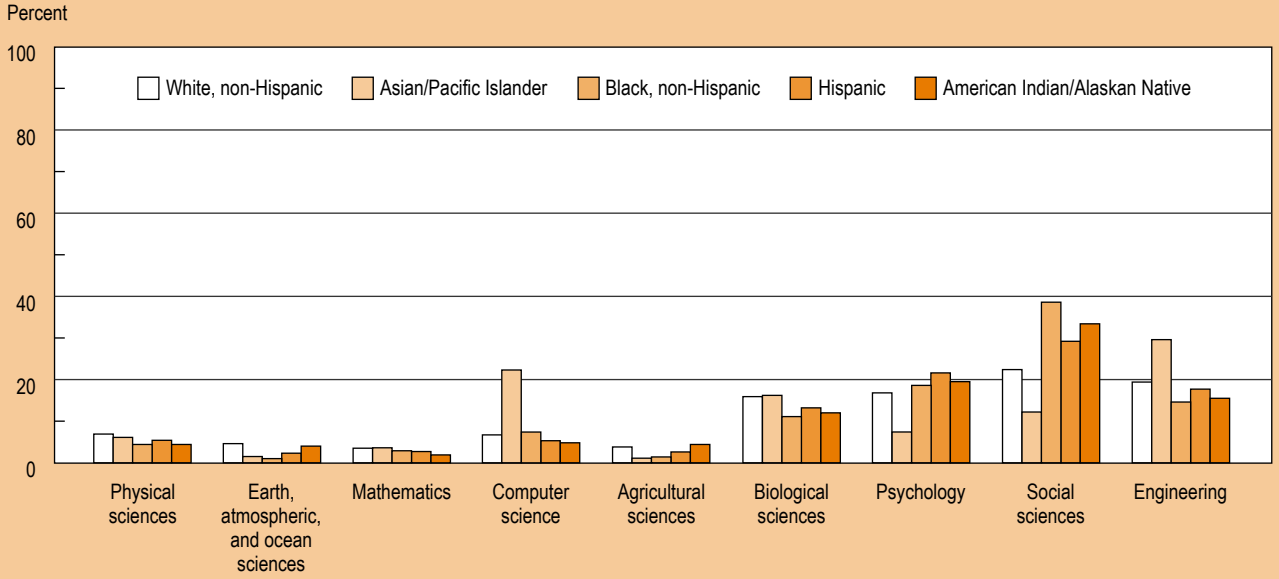
Institutional support was the most prevalent primary source of support for both men and women enrolled as full-time graduate students in science and engineering: 43 percent of men and 44 percent of women relied primarily on such support to finance their graduate education. Women are more likely than men to rely primarily on self-support: in 1999, 33 percent of women compared to 25 percent of men relied primarily on self-support to finance their graduate education. Federal support, on the other hand, was more likely to be the primary source of support for men than for women: 22 percent of men and 17 percent of women primarily financed their graduate education in this way.[9] (See appendix table 4-16.)

[7]Data refer to U.S. citizens and permanent residents only.

[8]First-professional programs include chiropractic medicine, dentistry, medicine, optometry, osteopathic medicine, pharmacy, podiatry, and veterinary medicine.

[9]Federal support may be directly provided to the student through fellowships or traineeships or indirectly provided through research assistantships.

Figure 4-4
Field distribution of S&E graduate students, by race/ethnicity: 1999

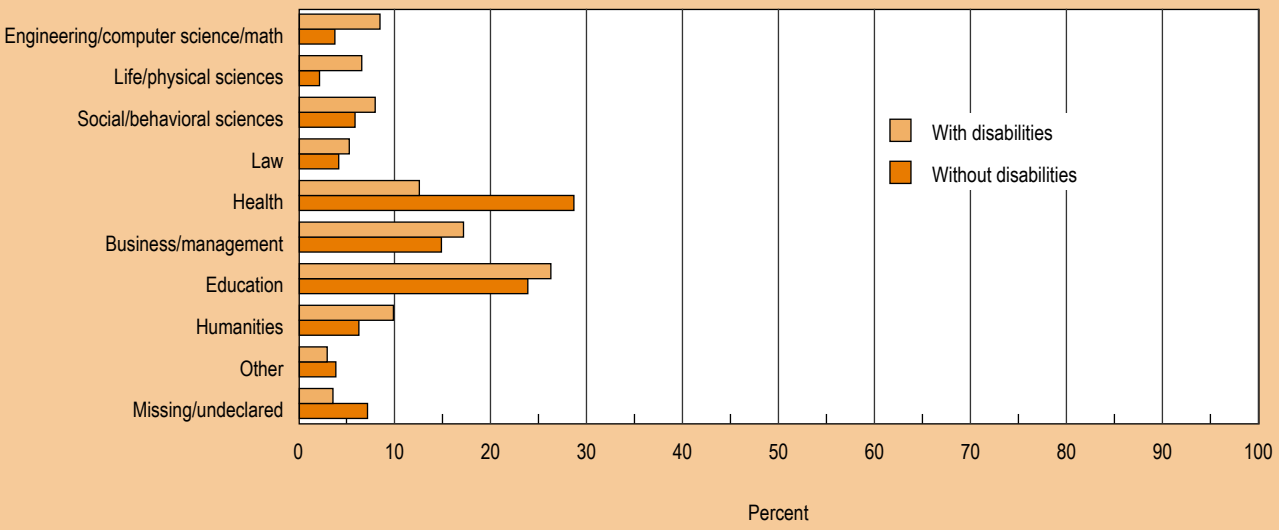


NOTE: Data are for U.S. citizens and permanent residents only and do not include students on temporary visas.

SOURCE: National Science Foundation, Division of Science Resources Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering, various years.

Women, Minorities, and Persons With Disabilities in Science and Engineering: 2002

Figure 4-5
Field distribution of graduate students, by disability status: 1996



SOURCE: U.S. Department of Education, National Center for Education Statistics, 1995–96 National Postsecondary Student Aid Study.

Women, Minorities, and Persons With Disabilities in Science and Engineering: 2002

Primary source of support varies greatly by field. For example, only 5 percent of graduate students in the physical sciences relied primarily on self-support, compared to 48 percent of those in psychology, 47 percent of those in computer science, and 40 percent of those in the social sciences. The percentages of graduate students funded primarily by Federal sources ranged from 6 percent in the social sciences to 35 percent in the physical and biological sciences. Reliance on institutional support ranged from 31 percent in computer science to 70 percent in mathematics.

Differences in field account for some of the differences between men and women in their respective sources of support. Thus, within engineering, the primary sources of financial support for male and female graduate students were quite similar: 25 percent of men and 26 percent of women relied primarily on self-support, 24 percent of men and 22 percent of women relied on Federal support, and 36 percent of men and 40 percent of women relied on institutional support. In the sciences, female graduate students were more likely than male to be self-supported (34 versus 25 percent), and they were less likely than males to have Federal support (17 versus 22 percent). As noted earlier, women account for more than half of the graduate students in psychology and the social sciences, fields in which large percentages of students rely primarily on self-support and small percentages of students rely primarily on Federal support. Within science fields, the differences between male and female graduate students in source of support were generally smaller. In each broad science field, however, a lower percentage of female full-time graduate students than male had Federal support, and a higher percentage relied primarily on self-support.

Minorities

Among U.S. citizen and permanent resident S&E graduate students enrolled full time for the full year, a smaller proportion of Asians (21 percent) received loans than of whites (36 percent) or of underrepresented minorities—i.e., blacks, Hispanics, and American Indians (43 percent). On the other hand, larger percentages of Asians than of other groups received research assistantships and teaching assistantships. (See appendix table 4-17.) A larger share of underrepresented minorities than of whites or Asians received grants. These differences may be due—at least in part—to variations in field as well as eligibility for various types of aid. For example, Asians who entered graduate school as students initially on temporary visas may not have been eligible for many Federal loan programs, but would have been eligible for research assistantships.

Students with disabilities

Although the National Center for Education Statistics, through its National Postsecondary Student Aid Study, collects data on disability status and provides information on field and enrollment status, the number of graduate students with disabilities in the study's sample is too small to generate reliable data on financial support for those in S&E programs.

Debt at graduation

At the time of doctoral degree conferral, differences exist between men and women, the various racial/ethnic groups, and graduates with and without disabilities in terms of their respective financial indebtedness.[10] Many of these differences are due to variations in field of degree. Psychology doctorate recipients, for example, are much more likely to have debt and report higher levels of debt than those with degrees in other S&E fields (NSF/SRS 2000). Psychology awards more than twice as many doctorates to women as to men and awards larger shares to blacks and Hispanics than does any other broad field.

Women

Overall, 39 percent of U.S. citizens receiving S&E doctorates between 1995 and 1999 reported no accumulated debt at the time of their doctoral degree award. A smaller percentage of women than of men reported not having any debt at all—37 versus 40 percent—and a larger percentage of women than of men reported having more than $30,000 in debt—13 versus 10 percent. (See appendix table 4-18.) Most of the overall difference in debt, as noted above, is field-related. Female S&E graduate students are far more likely than men to be in psychology departments, and psychology graduate students are far more likely to report debt than their peers in other S&E fields. Within most S&E fields, men are less likely to have no debt than women. In all fields except computer science and the social sciences, men are more likely than women to report debt over $30,000.

Minorities

Similarly, smaller percentages of blacks, Hispanics, and American Indians than of whites or Asians were debt free, and larger percentages reported debt over $30,000. Asians were the most likely of any racial/ethnic group to report no debt at all. These differences hold across most broad fields of S&E. Within most broad fields, black and Hispanic

[10] Student debt covers expenses incurred during undergraduate and/or graduate education for tuition, fees, living expenses, supplies, and transportation.

graduate students were less likely than whites and Asians to report no debt and more likely than other groups to report debt over $30,000. (See appendix table 4-19.)

Students with disabilities

Recipients of S&E doctoral degrees in 1995–99 who had disabilities were more likely than those without to report high levels of debt: 19 percent of those with disabilities and 11 percent of those without disabilities had debt over $30,000 at the time they graduated. Disaggregating by field does not eliminate these differences—within each broad S&E field, students with disabilities were more likely than those without to report more than $30,000 of debt. (See appendix table 4-20.)

Attrition

Factors related to persistence in or attrition from graduate study include integration into the "social and intellectual life of the institution" (Tinto 1993), relationships with faculty advisors (Golde 2000), and the type of financial support received. These factors are interrelated: both those who receive no support and those who receive full fellowships are less likely to be integrated into the department's social and intellectual life and are most likely to withdraw (Lovitts and Nelson 2000).

Women and men drop out of S&E graduate programs at approximately the same rates. Among those who enrolled in S&E master's or doctoral programs after completing a baccalaureate in the 1992/93 academic year, about 30 percent of both men and women were no longer enrolled and had not attained any higher degree by 1997. (See appendix table 4-21.) During that time period, similar percentages of men and women (41 and 44 percent, respectively) had completed a higher degree.

The differences between underrepresented minorities on the one hand and Asians and whites on the other in terms of percentages of students who were no longer enrolled and had not attained any higher degree are not statistically significant.

Students with disabilities are more likely than those without to drop out of graduate S&E programs. Among those who enrolled in S&E master's or doctoral programs after completing a baccalaureate in 1992/93, 58 percent of students with disabilities and 29 percent of those without were no longer enrolled and had not attained any higher degree by 1997. (See appendix table 4-21.)

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